

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/FI2005/000113

International filing date (day/month/year)  
23.02.2005

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC  
D21C9/16, D21C9/10, D21C5/02

Applicant  
KEMIRA OYJ

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

25.12.05

**3. For further details, see notes to Form PCT/ISA/220.**

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/FI2005/000113

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No:  
PCT/FI2005/000113

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-26
	No: Claims	NONE
Inventive step (IS)	Yes: Claims	NONE
	No: Claims	1-26
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	NONE

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: PATENT ABSTRACTS OF JAPAN vol. 014, no. 030 (C-678), 19 January 1990 (1990-01-19) & JP 01 266295 A (NIPPON SHOKUBAI KAGAKU KOGYO CO LTD), 24 October 1989 (1989-10-24) cited in the application
- D2: PATENT ABSTRACTS OF JAPAN vol. 2000, no. 18, 5 June 2001 (2001-06-05) & JP 01 148890 A (NIPPON SHOKUBAI KAGAKU KOGYO CO LTD), 12 June 1989 (1989-06-12) cited in the application
- D3: CA-A1-2 441 841 (UNIVERSITY OF NEW BRUNSWICK) 23 March 2004 (2004-03-23)
- D4: DATABASE WPI Section Ch, Week 198601 Derwent Publications Ltd., London, GB; Class D25, AN 1986-004442 XP002344420 & JP 60 231876 A (AIR LIQUIDE L) 18 November 1985 (1985-11-18)
- D5: WO 90/11403 A (HYMAC LTD) 4 October 1990 (1990-10-04)

1. Both documents **D1** (see also the present application, page 3, lines 16-28) and **D2** (see also the present application, page 3, lines 16-28) disclose pulp (wood pulp) bleaching (peroxide) comprising the addition of a copolymer based on AHPS and (meth)acrylic acid (preferred according to present claims 15 and 23) having a molecular weight within the required range, and, probably, chelating agents. Thus the subject-matter of present claim 1 would only appear to differ from the disclosures in **D1** and **D2** -at the most- in that there is no explicit teaching of an addition of a chelating agent. The addition of chelating agents for increasing the effect of bleaching compositions in the kind of processes as claimed is, however, well-known in the art, see e.g. **D3** (see examples 1,2; claim 1), **D4**, and **D5** (see page 3, line 34- page 5, line 23).

Therefore the subject-matter of claim 1 was obvious to the skilled man and lacks an inventive step.

2. A composition comprising a chelating agent and a polymer as of above, as claimed in independent claim 19, is not inventive either; all documents **D1-D5** relate either explicitly or implicitly to similar bleaching compositions.
3. Use of a corresponding composition as a stabilizer, as claimed in independent claim 25 is not inventive either. Such a use is known either explicitly or implicitly from the cited documents. Use as a stabilizer in deinking of a recycled fibre material, as claimed in independent claim 26, is not inventive either; Deinking is a form of bleaching.
4. As to the dependent claims, they only appear to comprise subject-matter related to routine optimization, well known measures and/or common chelating agents. It is thus not at present apparent which part of the application could serve as a basis for claims which are based on patentable subject-matter in the sense of Art 33(3) PCT. Should the applicant nevertheless regard some particular matter as patentable, (an) independent claim(s) should be drafted in the two-part form over closest prior art (would appear to be best represented by **D1** or **D2**). The applicant should also indicate (in case examination phase is entered) the difference of the subject-matter of the new claim(s) vis-à-vis the state of the art and the significance thereof.
  - 4.1 Thus, the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-26 does not involve an inventive step in the sense of Article 33(3) PCT.
5. For the assessment of the present claims on the question whether they are industrially applicable, no particular reasoning would appear necessary to give. The industrial application would appear to be evident (Art. 33(4) PCT).
6. It would appear expedient that the applicant (in case examination phase is entered) furnishes full-text translations of the original JP documents underlying the abstracts **D1**, **D2** and **D4** such that the ultimate relevance can be fully assessed.